

IN THE CLAIMS

The following is a complete listing of the claims with a status identifier in parenthesis.

Listing of Claims

1. (Previously presented) A vacuum switching chamber for switching short-circuit currents in the low-voltage range, including a stationary contact tip and a contact tip which can move axially with respect to the stationary contact tip, each contact tip including an associated power current connection, comprising:

an enclosure which surrounds the contacts, with the power current connection of the moving contact tip being in the form of a cylindrical bolt, the enclosure including rigid metal parts, an annular insulator and a resilient gas-tight metallic separating wall, connected to one another in an arrangement and connected in a gas-tight manner to the power current connections of the contact tips, and surrounding one of the rigid metal parts together with both the stationary contact tip and the moving contact tip, wherein the power current connection of the stationary contact tip is in the form of a plate, the metal part which surrounds the two contact tips is tubular and is connected at the end to the plate, and wherein the resilient, metallic separating wall includes a membrane which is provided with concentric corrugations, is in the form of a disk, and is soldered on one side to the power current connection of the moving contact tip and on the other side via an axially running annular flange to the annular insulator.

2. (Previously presented) The vacuum switching chamber as claimed in claim 1, wherein, for a switching movement of 3 to 5 mm, the membrane includes:

a wall thickness s of between 0.1 and 0.2 mm,

a corrugation depth t of approximately half the switching movement, and

a number Z of full corrugations, all of which satisfy the condition $Z \geq 1 + \text{integer } (\sqrt[3]{[(D_A - D_B) * s]})$, at least 3, where D_A = external diameter of the membrane, D_B = diameter of the power current connecting bolt of the moving contact tip, and s = thickness of the membrane.

3. (Previously presented) The vacuum switching chamber as claimed in claim 1, wherein the contact tips are in the form of flat spiral contacts.

4. (Previously presented) The vacuum switching chamber as claimed in claim 2, wherein the contact tips are in the form of flat spiral contacts.

5. (New) The vacuum switching chamber as claimed in claim 1, wherein the plate forms a relatively flat top portion of the enclosure.

6. (New) The vacuum switching chamber as claimed in claim 1, wherein the plate is proximate to the stationary contact tip.

7. (New) The vacuum switching chamber as claimed in claim 1, wherein the plate is connected to the stationary contact tip via a centering stub which is relatively shorter than the cylindrical bolt.

8. (New) The vacuum switching chamber as claimed in claim 6, wherein the plate is connected to the stationary contact via a centering stub which is relatively shorter than the cylindrical bolt.

9. (New) The vacuum switching chamber as claimed in claim 1, wherein the plate is directly connected to the stationary contact.

10. (New) A vacuum switching chamber, comprising:
a stationary contact;
a movable contact, movable with respect to the stationary contact;

a bolt, in contact with the movable contact and acting as a power current connection for the movable contact;

an enclosure surrounding the contacts and the bolt; and

a plate-like power current connection for the stationary contact, the plate-like power current connection forming a relatively flat top portion of the enclosure.

11. (New) The vacuum switching chamber of claim 10, further comprising an annular insulator and a resilient gas-tight metallic separating wall, connected to one another in an arrangement and connected in a gas-tight manner to the power current connections of the contacts, wherein the resilient gas-tight metallic separating wall includes a membrane provided with concentric corrugations in the form of a disk.

12. (New) The vacuum switching chamber of claim 11, wherein, for a switching movement of 3 to 5 mm, the membrane includes:

a wall thickness s of between 0.1 and 0.2 mm,

a corrugation depth t of approximately half the switching movement, and

a number Z of full corrugations, all of which satisfy the condition $Z \geq 1 + \text{integer } (\sqrt[3]{[(D_A - D_B) * s]})$, at least 3, where D_A = external diameter of the membrane, D_B = diameter of the power current connecting bolt of the movable contact, and s = thickness of the membrane.

13. (New) The vacuum switching chamber as claimed in claim 10, wherein the contacts are in the form of flat spiral contacts.

14. (New) The vacuum switching chamber as claimed in claim 12, wherein the contacts are in the form of flat spiral contacts.

15. (New) The vacuum switching chamber as claimed in claim 10,

wherein the plate-like power current connection for the stationary contact is proximate to the stationary contact.

16. (New) The vacuum switching chamber as claimed in claim 10, wherein the plate-like power current connection for the stationary contact is connected to the stationary contact via a centering stub, which is relatively shorter than the bolt.

17. (New) The vacuum switching chamber as claimed in claim 15, wherein the plate-like power current connection for the stationary contact is connected to the stationary contact via a centering stub which is relatively shorter than the bolt.

18. (New) The vacuum switching chamber as claimed in claim 10, wherein the plate-like power current connection for the stationary contact is directly connected to the stationary contact.